We claim:

1. An optical path for an optical instrument comprising:

a light source;

diffraction means for diffracting light from the light source;

a beam splitter including an entry end for admitting light from the diffraction means and including a plurality of optical fibers leading from the entry end to an exit end of the beam splitter;

a sample detector and a reference detector both located adjacent to the exit end of the beam splitter;

wherein a first portion of the optical fibers in the beam splitter transmits light from the entry end of the beam splitter to the sample detector and a second portion of the optical fibers transmits light from the entrance end of the beam splitter to the reference detector, wherein the optical fibers are bifurcated amongst the first and second portions at a point adjacent to the reference detector.

2. The device of claim 1, wherein the optical fibers are grouped into groups of three fibers, wherein two of the fibers in each group transmit light to the sample detector and wherein one of the fibers in each group transmits light to the reference detector.

3. The device of claim 1, wherein a cross sectional shape of the optical fibers in the beam splitter is a circle.

4. The device of claim 1, wherein a cross sectional shape of the optical fibers in the beam splitter is a parallelogram.

5. The device of claim 1, wherein the beam splitter is housed in a retractable member.

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